

Appl. No. 10/729,273
Amdt. Dated June 7, 2005
Reply to Office action of March 7, 2005

IN THE DRAWINGS:

Please substitute the one (1) sheet of drawings submitted herewith containing Figures 4-7 in place of the originally-filed drawing sheet containing the same Figures.

REMARKS

Claims 1-9 and 18-20 are pending in the above application. Claims 10-17 having been withdrawn from further consideration in response to a Restriction Requirement.

Information Disclosure Statement Objection

Paragraph 3 of the Office action objects to the Information Disclosure Statement submitted December 5, 2003 as containing an illegible copy of the foreign patent document cited therein. In response, Applicants submit herewith a clean copy of GB 1 327 952 for consideration. No fee is believed due in connection with this Information Disclosure Statement as the British reference enclosed herewith was previously cited in the timely-filed original Information Disclosure Statement.

Drawing Objections

Applicants submit herewith a replacement sheet of drawings containing Figures 4-6 to replace the originally-filed drawing sheet containing the same Figures. In the replacement sheet, the reference character "E" in Figure 7 has been changed to "IE" consistent with the specification at paragraph [0041]. No new matter has been added.

Claim Objections And Rejections

With regard to the claim objections set forth in paragraph 5 of the Office action, 37 C.F.R. §1.75(g) is a permissive rule, not a mandatory rule. Further, independent claims 1 and 9 have a similar, although not identical, claim scope. Hence, the claims as originally presented are both proper and the most practicable given the written description of the various embodiments and the ordering of the embodiments within the description and the figures. Thus, at this time, Applicants see no need for renumbering the claims. However, after allowance, if the Examiner wishes to reorder the claims, the Applicants would not object.

With regard to the rejection of claims 8 and 20 under 35 U.S.C. §112, first paragraph, Applicants submit that an enabling disclosure has been provided with respect to the claimed subject matter. Under Federal Circuit precedent, enablement requires that "the specification must teach those skilled in the art how to make and use

the full scope of the claimed invention without 'undue experimentation'." *In Re Wright*, 999 F.2d 1557, 1561 (Fed. Cir. 1993). However, identical language of terms need not be used in the specification and claims. Rather, the scope of the enablement must only bear a "reasonable correlation" to the scope of the claims. *See, In Re Fisher*, 427 F.2d 833, 839 (CCPA 1970). In this regard, Applicants submit that the scope of the enablement provided by the description to one of ordinary skill in the art is commensurate with the scope of protection sought by the claims. The specification at paragraph [0029] explains that the cylindrical open end 66, towards the hollow shaft 42, is "sealed by a grease cover 48." The figures also show one example of a sealingly attached grease cover 48 wherein the grease cover 48 is press-fit within the cylindrical open end 66 of the joint 11. Because it is press-fit, however, the cover 48 is also clearly displaceable should the connecting shaft 44, for example, continue traveling through the extended axial range E as shown in Figure 3. Further, the same paragraph describes the grease cap 48 as capable of absorbing energy, i.e., during displacement in a crash event, the grease cap will dissipate some of the energy. Thus, the scope of the enablement is commensurate with the scope of protection sought by the claims and, at a minimum, bears a reasonable correlation to the scope of the claims. In other words, the specification enables one of skill in the art to make and use the full scope of the claimed invention without any undue experimentation. Accordingly, the rejection of claims 8 and 20 under 35 U.S.C. §112, first paragraph, should be withdrawn. Nevertheless, in the interest of clarity, the Applicants have amended the specification at paragraph [0029] to use terminology identical to the terms set forth in the claims as originally filed.

With regard to the rejections of claims 1, 9, and 19 under 35 U.S.C. §112, second paragraph, for indefiniteness, the Applicants have amended each of claims 1, 9 and 19 to clarify that the inner ball tracks and outer ball tracks referred to therein are either angled or straight with respect to the rotational axis of the respective joint part. Again, Applicants submit that one of skill in the art would readily understand what Applicants are referring to in these claims because the specification makes clear that the joint under consideration is an axially plungeable constant velocity joint of the cross-

groove hybrid type. Accordingly, the inner and outer ball track pairs extend in alternating angled and straight relationship to the rotational axis of the joint. This feature is shown, for example, in Figures 6 and 7. Thus, the claims, as amended, are definite and the rejection under 35 U.S.C. §112, second paragraph, should be withdrawn.

Claims 1, 9, 19 and 20 stand rejected under 35 U.S.C. §103 as being unpatentable over the admitted prior in view of Booker, U.S. Patent No. 6,585,601. The Applicants traverse the rejections under 35 U.S.C. §103 and submit that a *prima facie* case of obviousness has not been established. The '601 patent to Booker discloses a propeller shaft assembly having a constant velocity universal joint with a controlled collapsing feature. In particular, Applicants traverse the suggestion in the Office Action that Booker shows a constant velocity joint which includes an energy absorption surface 34 that interferes with torque-transmitting balls 28 when the joint is operated beyond its normal axial plunge range. Rather, Applicants submit that the specification of Booker clearly indicates that the outer rearward portion 34 does not act as an energy absorption surface as claimed in the present invention. Indeed, the outer rearward portion 34 of Booker does not even act as a stop, as in prior art designs. Instead, Booker creates a "drop condition 37." "The drop condition 37 is created by allowing the torque transmitting balls 28 to cross the edge of the inner forward portion 35 prior to edge of the outer rearward portion 34 contacting the torque transmitting balls 28." ('601 Patent, Col. 3, lines 61-65). In other words, the device of Booker provides minimal collapse resistance and prevents the balls from having any interference-type energy absorption function with respect to the inner or outer ball tracks.

Accordingly, Applicants submit that a *prima facie* case of obviousness has not been established as the Booker reference fails to disclose or suggest at least Applicants' claimed feature that one or more deformable energy absorption surfaces be provided within the outer extended axial range or inner extended axial range on the outer joint part or inner joint part, respectively, such that the energy absorption surface interferes with at least one of the plurality of torque transmitting balls when the joint is operated beyond its normal axial plunge range. Applicants therefore request that the

rejections under 35 U.S.C. §103, which all rely upon Booker, be withdrawn because the Booker reference fails to disclose or suggest each and every element of Applicants' claimed invention.

Applicants further traverse the rejection of claims 2-8 and 18 under 35 U.S.C. §103 in view of the admitted prior art, Booker, and Krude, U.S. Patent No. 4,202,184. Applicants submit that Krude does not teach anything like Applicants' claimed deformable annular circlip. The ring 15 of Krude is merely described as a sealing ring. It is neither a circlip, nor an energy absorbing device. Thus, the combination of references fails to disclose or suggest an energy absorption surface in the form of a circlip as required by claims 2-8 and 18.

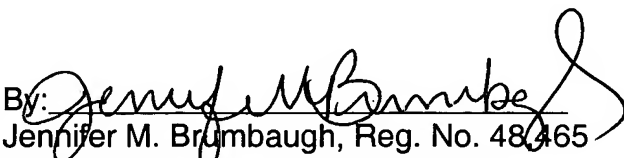
Conclusion

Having overcome all of the objections and rejections set forth in the Office Action, Applicants submit that the application and claims are in a condition for allowance. A Notice of Allowance indicating the allowability of claims 1-9 and 18-20 should be issued. The Examiner is invited to telephone the Applicants' undersigned attorney at (248) 377-1200 if any unresolved matters remain.

Respectfully Submitted,

GKN Driveline North America, Inc.

Dated: June 7, 2005

By: 
Jennifer M. Brumbaugh, Reg. No. 48,465
Mick A. Nylander, Reg. No. 37,200
GKN Driveline North America, Inc.
3300 University Drive
Auburn Hills, MI 48326-2362
(248) 377-1200

Attachments